



Dental Clinical Policy

Subject:	Local Delivery of Chemotherapeutic Agents/Antimicrobial Agents	Publish Date:	01/01/2025
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Description

This document addresses the use of local delivery of chemotherapeutic agents/local delivery of antimicrobial agents (LDCA/ LDAA) as part of periodontal disease management. LDCA/LDAA may be appropriate when used as adjunctive therapy to treat refractory pockets following initial therapy with periodontal scaling and root planing or in conjunction with periodontal maintenance.

Clinical Indications

Appropriateness of Care:

Evaluation for the use of LDCA/LDAA treatment modalities for refractory disease sites is made following completion of definitive non-surgical and/or surgical periodontal treatment. Refractory disease sites include areas of periodontal pocketing equal to or greater than 5 millimeters (mm) with persistent signs of inflammation, spontaneous bleeding or bleeding upon probing, suppuration and/or increasing loss of clinical attachment. Local delivery of chemotherapeutic agents may also be indicated when isolated refractory sites are diagnosed at periodontal maintenance appointments.

Contraindications:

LDCA/LDAA modalities are not appropriate for periodontal probing depths of less than 5mm. When a generalized pattern of periodontitis is diagnosed, a more comprehensive intervention may be necessary, surgical therapies should be considered.

Note: Whether a service is covered by the plan, when any service is performed in conjunction with or in preparation for a non-covered or denied service, all related services are also either not covered or denied.

Criteria

1. Scaling and root planing is highly effective in the treatment of chronic periodontitis and is the standard approach to non-surgical periodontal therapy. In most cases, the majority of diseased sites will respond to non-surgical and will not require LDCA/LDAA adjunctive therapy.
2. After allowing adequate time for healing, local delivery of antimicrobial agents may be performed six weeks to six months post scaling and root planing or periodontal surgery.
3. Teeth to be treated must demonstrate an active/refractory site, usually described as a periodontal pocket measuring 5 millimeters or greater with spontaneous bleeding, bleeding on probing, or suppuration and a history of increasing pocket depth with associated attachment loss.

4. If there are multiple sites of recurrent and/or residual inflammation after periodontal scaling and root planing has been completed, more extensive periodontal therapeutic modalities, for example, periodontal surgical procedures, may need to be appropriately employed.
5. The use of subgingivally placed chemotherapeutic agents may also be indicated as an adjunct to periodontal maintenance therapy when localized recurrent and/or residual sites with inflammation are found.
6. The use of the LDCA/LDAA antimicrobial agents have not been clinically tested for use in the regeneration of alveolar bone. The use of LDCA/LDAA products in this application is considered by the plan to be experimental and investigational.
7. A current (within 12 months), dated, post periodontal maintenance and/or post-periodontal surgery, 6-point periodontal charting is required.
8. The use of LDCA/LDAA in medically compromised patients will be reviewed on a case-by-case basis and will require physician documentation.
9. Only those natural teeth with favorable periodontal outcomes will be considered for benefit.
10. Current American Academy of Periodontology (AAP) and American Dental Association (ADA) guidelines require a periodontal diagnosis including staging and grading.

Coding

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

- CDT** *including but limited to* D4381 Localized delivery of antimicrobial agents via a controlled release vehicle into diseased crevicular tissue per tooth
- D4341 periodontal scaling and root planing, four or more teeth per quadrant
- D4342 periodontal scaling and root planing, one to three teeth per quadrant
- D4346 scaling in the presence of generalized moderate or severe gingival inflammation - full mouth, after oral exam
- D4910 Periodontal maintenance
- D4999 Unspecified periodontal procedure, by report
- D6081 Scaling and debridement in the presence of inflammation or mucositis of a single implant, including cleaning of the implant surfaces, without flap entry and closure.

ICD-10 CM Diagnoses for Dental Diseases and Conditions: See the current CDT code book for details

References

1. Position Paper: The Role of Controlled Drug Delivery for Periodontitis. J Periodontol. 2000;71(1):125-140. doi:10.1902/jop.2000.71.1.125
2. American Academy of Periodontology Statement on Local Delivery of Sustained or Controlled Release Antimicrobials as Adjunctive Therapy in the Treatment of Periodontitis. J Periodontol. 2006;77(8):1458. doi:10.1902/jop.2006.068001
3. Minsk L. Evidence-based nonsurgical periodontal therapy. Compend Contin Educ Dent. 2003;24(11).

4. Williams RC, Paquette DW, Offenbacher S, et al. Treatment of periodontitis by local administration of minocycline microspheres: a controlled trial. *J Periodontol.* 2001;72(11):1535-1544. doi:10.1902/jop.2001.72.11.1535
5. Hanes PJ, Purvis JP. Local anti-infective therapy: pharmacological agents. A systematic review. *Ann Periodontol.* 2003;8(1):79-98. doi:10.1902/annals.2003.8.1.79
6. Bonito AJ, Lux L, Lohr KN. Impact of local adjuncts to scaling and root planing in periodontal disease therapy: a systematic review [published correction appears in *J Periodontol.* 2006 Feb;77(2):326] [published correction appears in *J Periodontol.* 2006 Feb;77(2):326-327]. *J Periodontol.* 2005;76(8):1227-1236. doi:10.1902/jop.2005.76.8.1227
7. Oringer RJ, Al-Shammari KF, Aldredge WA, et al. Effect of locally delivered minocycline microspheres on markers of bone resorption. *J Periodontol.* 2002;73(8):835-842. doi:10.1902/jop.2002.73.8.835
8. Greenstein G. Nonsurgical periodontal therapy in 2000: a literature review. *J Am Dent Assoc.* 2000;131(11):1580-1592. doi:10.14219/jada.archive.2000.0087
9. Tomasi C, Koutouzis T, Wennström JL. Locally delivered doxycycline as an adjunct to mechanical debridement at retreatment of periodontal pockets. *J Periodontol.* 2008;79(3):431-439. doi:10.1902/jop.2008.070383
10. American Academy of Periodontology. AAP Statement on Parameters of Care Supplement; Parameter of "Refractory" *J Periodontol* 2000;71:859-860.
11. Smiley CJ, Tracy SL, Abt E, et al. Systematic review and meta-analysis on the nonsurgical treatment of chronic periodontitis by means of scaling and root planing with or without adjuncts. *J Am Dent Assoc.* 2015;146(7):508-24.e5. doi:10.1016/j.adaj.2015.01.028
12. onito AJ, Lux L, Lohr KN. Impact of local adjuncts to scaling and root planing in periodontal disease therapy: a systematic review [published correction appears in *J Periodontol.* 2006 Feb;77(2):326] [published correction appears in *J Periodontol.* 2006 Feb;77(2):326-327]. *J Periodontol.* 2005;76(8):1227-1236. doi:10.1902/jop.2005.76.8.1227

History

Revision History	Version	Date	Nature of Change	SME
	Initial	03/27/2018		Kahn and Clinical Policy Committee
	Revised	11/10/2020	Annual Review	Committee
	Revised	12/05/2020	Annual Review	Committee
	Revised	10/30/2021	Annual Review	Committee
	Revised	10/28/2022	Annual Review	Committee
	Revised	10/18/2023	Annual Review	Committee
	Revised	10/28/2024	Minor editorial refinements to description, clinical indications, and criteria (line #10 added); intent unchanged. Changed name of document to reflect	Committee

			document information	

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